MONTANA UNDERGROUND STORAGE TANK PROGRAM NEWSLETTER

MUST News

Department of Environmental Quality — Summer Issue 2005

Getting Acquainted: Who Are We and What Do We Do?

by *Bill Rule, Manager*
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Those of us who live in the regulatory world can get buried in minutiae. We try to communicate the fine lines in the grey areas of rules and policies. Sometimes we forget that basic information needs its moment in the sun as well. What follows is a discussion of UST regulatory basics, how the UST Program evolved, and some tools to make our regulations more comprehensible.

The **Underground Storage Tank Section** of the Department of Environmental Quality regulates underground petroleum and hazardous substance tanks. That includes fueling facilities, heating oil tanks, emergency generator tanks, waste oil tanks and more.

Our primary mission is groundwater protection. Leaks, spills, and overfills from underground storage tanks can ruin a lot of water in a hurry. The Underground Storage Tank Section's job is prevention and early detection of petroleum releases. We do this by conducting inspections, permitting, and education.

The **Petroleum Release Section** of DEQ manages the cleanup of petroleum releases if tank systems fail. That can be expensive, so regulations also require that a facility show they have enough money to dedicate to remediation if their tank systems do leak. That part of our regulations is called

continued on page 2

Inside This Issue

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Getting Acquainted: Who Are We and What Do We Do? - *continued from page 1*

Financial Responsibility. Facilities need $1,000,000.00 worth of coverage in case they need to clean up a release.

The **Petroleum Tank Release Compensation Fund** provides much of that coverage, $982,500 of it, if a facility has a valid operating permit from our program. Fund coverage is a function of operating permits. Operating permits are issued as a function of compliance inspections.

Compliance inspections are conducted by private-sector inspectors every three years. Facility owners hire them. You should have your compliance inspection conducted about six months before your operating permit expires.

If you can't find your operating permit, we need to talk. It's a valuable document to you.

Recent History of Underground Storage Tank Regulation

In 1984 Congress directed the U.S. Environmental Protection Agency to develop a comprehensive regulatory program for underground storage tanks. The federal regulations became effective in 1988. Montana regulations became effective in 1989.

During the first ten years of regulation, state programs focused on the 1998 upgrade requirements. Beginning in 1988, facilities had ten years to bring tank systems up to new standards or remove them. These upgrade requirements mandated that underground storage tank systems provide leak detection, spill protection, overfill prevention and corrosion protection. Operation and maintenance requirements were in-place as well.

For ten years, Montana upgraded and pulled tanks. From 1988 to 1998, Montana permanently closed over 20,000 underground storage tanks. Montana now regulates about 4,000 active USTs at 1,500 facilities.

During the 1998 upgrades the UST program focused our attention on ensuring that proper equipment was installed and substandard tanks were closed. Then we, with all other states, turned our attention to the operation and maintenance of equipment.

This change in focus frustrated many owners. "We just spent all this money on equipment. We were told it would do all the monitoring for us," they said. It doesn't; and, like any mechanical or electronic equipment, it must be tested and maintained as well.

It is not enough to install leak-detection monitoring equipment; you have to look at what that equipment tells you, and you have to prove you looked at it. It is not enough to install leak detectors; you have to test them once a year. And you have to prove that, too.

Montana's UST inspections declined during the last push of the 1998 upgrades. Then, in 1999, the Montana Legislature privatized the inspection program and required that facilities be inspected every three years. Every facility had to have an inspection by a licensed private-sector compliance inspector by January 1, 2002, and every three years thereafter.

That same law mandated full compliance of facilities if they were to operate. We learned the hard way that this mandate was neither fair nor achievable.

In the two subsequent sessions of the state legislature, in 2001 and 2003, the law was amended. We still require full compliance, but we have less onerous enforcement mechanisms in-place. In most cases, you can continue to operate your UST system while you correct deficiencies.

"We Don't Understand What You Want From Us"

We hear that a lot. One problem we encounter when working with counties, schools, hospitals and larger corporations is that our outreach efforts go to a main office, to the "owner" of the facility. Much of our technical outreach would be better-placed in the hands of the person managing the tank system. Even our administrative outreach can sink to the depths of a busy in-box and languish there indefinitely. We recommend that you keep the UST Program informed as to where you want your correspondence from us to be sent.

In the best of hands, UST operation and maintenance regulations are complex because systems differ so much. Owners can apply a variety of leak detection and leak

continued on page 3

Getting Acquainted: Who Are We and What Do We Do? - *continued from page 2*

prevention methods and each method has its own regulatory idiosyncracies.

The UST Program is doing its best to demystify the requirements. We have operation and maintenance manuals, checklists and soon will have Web-based training available. But even when the information is simplified, UST managers must apply themselves to understand it and to keep up with a timetable of operation and maintenance and administrative requirements.

Compliance Basics and Other Helpful Tools

Leak prevention consists of spill protection, overfill prevention and corrosion protection. **Leak detection** methods monitor for leaks in your tanks and piping.

You provide **spill prevention** by installing liquid-tight spill buckets. When delivery people couple and uncouple the hose (or remove it) from your fill port, small spills often result. The bucket holds those small spills so that you can drain them back into the tank instead of spilling them on the ground. Your spill bucket should be kept clean so you can drain these spills into your tank without compromising the quality of your fuel. It should go without saying that these spill buckets must be liquid-tight or they won't do their job.

Overfill prevention keeps delivery personnel from overfilling your tank. The three acceptable means of providing overfill prevention are with a ball float vent valve, a flapper valve (installed in the fill pipe), and an alarm which activates when a tank is 90% full.

Corrosion protection prevents steel components of your system from rusting through and leaking. Different types of corrosion protection have different requirements.

Early detection of leaks is the other major component of technical UST compliance standards. Every month tank owners need to make certain their tank is not leaking. There are seven approved ways to do this with hundreds of different types of approved equipment.

Piping needs two forms of leak detection. For the first, you can use an annual precision line tightness test or a monthly method similar to that used for tanks. You must also have a method of operating continuously that will tell you if you have a leak greater than 3.0 gallons per hour.

Having the proper equipment in-place is just one part of compliance. You also have to test it and maintain it. You also have to look at what the monitoring equipment is telling you and record that information as proof that you are watching for leaks.

A couple of administrative points:

1) If you conduct work on your UST system you probably need a permit from the department and you need a licensed installer to conduct the work.

2) Your operating permit is your license to operate and your key to financial responsibility. To keep an operating permit, you must have your facility inspected by a licensed compliance inspector every three years. Check your current operating permit for its expiration date. Have a compliance inspection conducted about six months before the operating permit expires.

But there is much more for a tank manager to know. The DEQ is aware that UST compliance regulations are complex. We continually try to simplify these requirements. The following tools are all free.

Operation and Maintenance Information

A couple of months ago, MaCo made an operation and maintenance checklist available to you. That checklist is available at **www.pei.org/PDF/checklist.pdf.**

EPA's Operation and Maintenance Manual is an excellent workbook and primer. It is available at **www.epa.gov/swerust1/ustsystm/tanko&m.htm.**

EPA's other tank-related publications are available at **www.epa.gov/swerust1/pubs/ommanual.htm** "Straight Talk on Tanks" is an excellent guide to leak detection.

Montana is developing an on-line training program which will teach you about your own facility. The beauty of this application is that the training filters out all the information

continued on page 4

Getting Acquainted: Who Are We and What Do We Do? - *continued from page 3*

that does not apply to you. This eliminates having to wade through 80% of the regulatory material that is irrelevant in your situation. The end result of this training can be, if you want it, a compliance plan targeted to the specific needs of your facility. We expect this training to be available in October 2005. It will be accessed at **www.tankhelper.mt.gov.**

If you are motivated to learn even more about tank regulation, we recommend EPA's web-based inspector training. Even if you don't want to take the entire training, you can use this link as a resource to learn about specific parts of a tank system or the regulations that apply to it. This course can be accessed at **www.neiwpcc.org/.oust1.html.**

Administrative

Montana's UST Section hosts a web page that can tell you about our approach to USTs. It includes our purpose, our processes, lists of licensed individuals, and other things you may want to know about permitting and compliance. That web page can be accessed at **www.deq.mt.gov/UST/index.asp.**

Deeper in that web page is a list of facilities and the expiration dates of their operating permits. **www.deq.mt.gov/UST/MonthlyReportsPDF/USTFacilityOperatingPermitStatus.pdf.**

You can learn what information the department has about your facility by entering your facility name or number in **http://nris.mt.gov/deq/remsitequery/default.aspx?qt=ust.**

The regulations themselves can be accessed at **www.deq.mt.gov/dir/legal/Chapters/Ch56-toc.asp.**

Statutes are available at **data.opi.mt.gov/bills/mca_toc/75_11_5.htm.**

And, of course, DEQ staff is available to answer questions and conduct training. Please call us with questions at (406) 444-5300 or e-mail them to **ustprogram@mt.gov.** ■

Inspect Early

Winter is coming. Inspections are harder to conduct; corrective action can be harder yet. The UST program encourages you to inspect early. If you want to move the anniversary date for your operating permit earlier in the year, please inspect early and let us know that you want the anniversary date moved. ■

Watch for Web-based Owner-Operator Training

Web-based owner-operator training is coming soon. We hope to have it ready to go in October.

The developers and UST Section staff are currently testing the program for functionality and accuracy. We also plan to test it with some owners. If you would like to help us test the program, please call Ben Thomas Associates toll free at 1-888-301-8265.

When the training is complete it will be accessed at **www.tankhelper.mt.gov.** ■

Classes, Testing Available for UST Professionals

A series of refresher classes and licensing tests is scheduled in October in Helena for underground storage tank professionals. All classes and tests will be in the Montana Department of Environmental Quality's Metcalf Building, 1520 East Sixth Avenue.

State law requires licensing of anyone who installs, closes, repairs, modifies or inspects underground storage tank systems, including underground piping connected to above-ground tanks. The law also requires licensing of anyone who installs corrosion protection, tank liners and external leak-detection equipment.

A refresher course for tank inspectors is set for October 5 and a refresher class for tank installers is on October 6. Both refresher classes start at 8 a.m. A refresher class for tank removers only is October 6 at 1 p.m. Anyone currently licensed for underground storage tank work can attend these classes to earn continuing education credit.

Also on October 5 and 6, the DEQ offers licensing tests for installer/removers, removers, installers of corrosion protection, tank liners and external leak-detection equipment. Written tests are open to all applicants for new licenses and to those who must retest to maintain current licenses. All new applicants must register and submit a $100 fee to the Department of Environmental Quality, Waste and Underground Tank Bureau, P.O. Box 200901, Helena, MT 59620-0901.

Application forms and more information are available on the department's web site at **www.deq.mt.gov** or by telephone from the Underground Storage Tank Section at 406-444-5300. The department will make reasonable accommodations for persons with disabilities who wish to participate in this testing or who need an alternative accessible format of this notice. Please contact the department at 406-444-2929 to advise us of the accommodation needed. ■

Petro Board Has Two New Members

Gov. Brian Schweitzer recently appointed two new members to the Montana Petroleum Tank Release Compensation Board.

Theresa Blazicevich of Stevensville and Frank Boucher, Jr. of Helena are new to the seven-member board.

The board manages a fund that assists owners and operators of petroleum storage tanks in cleaning up petroleum contamination and provides compensation for third-party damages resulting from spills. The board meets in Helena about six times annually.

Blazicevich is the director of the Ravalli County Environmental Health Department and fills a newly created board position designated for a person with environmental regulatory experience.

Boucher, a banker, replaces Barry Johnston of Big Fork whose term expired as the member filling the position designated for a representative of the financial or banking industry.

Greg Cross of Billings, representing independent petroleum marketers and chain retailers, is the acting presiding officer of the board.

Other members are Roger Noble of Kalispell, representing the petroleum release remediation consultant industry; Shaun Peterson of Helena, representing the insurance industry; Frank Schumacher of Black Eagle, representing service station dealers; and Thomas Bateridge of Missoula, public representative. ■

New Manual Has Much About Sumps

The U.S. Environmental Protection Agency has published a new 16-page manual on recommended inspection guidelines and best management practices for sumps associated with underground storage tank systems.

The manual can help tank owners and operators identify and inspect sumps associated with their UST systems, including equipment in the sumps. The manual explains some simple steps for maintenance and identification of potential problems.

Safety considerations and a general introduction to kinds of sumps are also covered in the manual.

Free copies of the manual are available from the EPA distribution warehouse, NSCEP, at 800-490-9198. Or you can download a color copy in PDF format from the EPA web site: **www.epa.gov/OUST/pubs.** ■

The Buzz Over Biofuels

by Howard Haines and Betsy Hovda
Montana Department of Environmental Quality

One of a series of columns on alternative fuels

There has been a lot in the news about ethanol and biodiesel, so this article hopes to continue the trend and focus on these renewable fuels. Biodiesel and ethanol blends can be used in vehicles on the road today. About 99.47 percent of Montana's transportation energy is supplied by petroleum gasoline and diesel, with ethanol, propane, natural gas and biodiesel supplying the remainder.

Rudolph Diesel demonstrated his new invention, a compression ignition engine, at the 1900 Paris Exposition fueled by peanut oil. Today, EPA defines biodiesel as the methyl or ester of plant or animal fats. It offers a seamless way to transition diesel vehicles into a cleaner burning fleet because biodiesel works in existing diesel engines. A blend of 20 percent biodiesel with petroleum diesel (B20) can be used in automotive diesel engines made after 1987. B20 does not affect fuel economy and reduces emissions by about 40 percent. Higher blends of biodiesel produce greater environmental benefits, but first need rubber hoses and gaskets replaced. Using biodiesel in a vehicle that has used petroleum diesel for a time will require a fuel filter change because the biodiesel blend will clean all the varnish from the tank and fuel lines.

There were 33 million gallons of pure biodiesel made in the U.S. for fuel in 2004. DEQ and its predecessors have been working to develop biodiesel since 1982. Biodiesel was used to fuel the first alternate fueled vehicle in the world's first national park in 1995 using Montana-grown canola. Montana used 70,000 gallons of pure biodiesel or about 350,000 gallons of B20 in 2003. Seven fleets use B20 at least part of the year in Montana supplied by four retail outlets.

This year's legislative action

Several laws passed by the 2005 Montana Legislature affect biodiesel producers. House Bill 776 provides tax incentives for distribution of biodiesel made from Montana products with diesel. The bill includes a tax refund to distributors and owners of motor fuel outlets for fuel taxes paid on biodiesel from the state's general fund. House Bill 756 encourages the production of biodiesel through a tax credit for investments in depreciable property to crush oilseed crops to make biodiesel. It also provides tax credit to a facility producing biodiesel based upon the cost of constructing and equipping the facility.

continued on page 7

The Buzz Over Biofuels - *continued from page 6*

Sustainable Systems LLC hopes to begin production of biodiesel at the Montola Growers Inc., plant in Culbertson, Montana, in 2006. Others have expressed interest in producing biodiesel in Malta, Kalispell, Bozeman and Missoula.

In addition to being a domestically produced, renewable alternative fuel for diesels, biodiesel has a higher cetane number, higher fuel lubricity, and higher oxygen content than petroleum diesel. It may be a preferred lubricity additive (as a two-percent blend) for the low-sulfur diesel coming to Montana in 2007.

Ethanol, or grain alcohol, has been around for a long time, and was known during prohibition as moonshine. Henry Ford originally designed his Model-T to run on it. The Clean Air Act of 1970 required all on-road vehicles sold in the United States to be able to use all legally blended oxygenated fuels. This means all cars and trucks built since 1978 can use a 10-percent blend of ethanol and gasoline, or E10.

The demand for ethanol fuel was sparked by the move in many states to ban methyl tertiary butyl ether (MTBE) as Montana did in 2005. The MTBE bans are causing a demand for ethanol that is expected to reach or exceed 9 billion gallons by 2012.

In 2003, 3.6 billion gallons of denatured ethanol were produced in the U.S., mostly using corn. Ethanol was produced in Montana from wheat and barley from 1980 until 1995. The State Motor Pool used ethanol from 1983 to 1985. Over 17 million gallons of ethanol blend was sold in Montana in 2003 at about 50 retail outlets selling E10, and two stations, in Helena and West Yellowstone, selling E85.

E85 is a generic fuel name, varying by season that can contain up to 85 percent ethanol and 15 percent gasoline. Unlike E10, not every vehicle can use E85. Manufacturers change about seven parts, including the computer chip, to make a regular vehicle into a "flex-fuel" E85 vehicle – a car that can use any amount of denatured ethanol from zero-to-85 percent blend.

Focus on production helped by legislation

Some manufacturers equipped their entire production of select vehicles with E85-compatible parts, lowering the production cost of the vehicles. Examples include Chrysler Town and Country and Dodge Caravan minivans from late 2004 on, Ford Taurus (select versions since 1998), and Chevy Suburban, to name a few. A review in 2001 showed there were more than 6,000 E85 vehicles registered in Montana.

The biggest gain, economically and efficiency-wise, is expected when ethanol can be made from biomass, or lignocellulosic materials like grass straw, wood wastes, and used newsprint. Twice as much ethanol can be made from a pound of cellulose as from a pound of starch, and the cellulose is usually cheaper. By changing the way paper is made, researchers found an economical way to extract important energy-rich sugars from the trees and then convert these sugars into ethanol and other useful chemicals. If these methods were used at U.S. paper mills, 2.4 billion gallons of ethanol could be produced annually, eliminating a number of waste streams in the process.

The Montana Legislature this year passed key legislation to enhance the development of ethanol use and production in the state. Senate Bill 293 revised laws related to alternative fuels and petroleum products requiring that ethanol be added to gasoline in Montana when refineries in the state reach and maintain certain production levels. The statue includes an income tax refund for fuel tank owners who convert their tanks and use E10, and another for distributors who convert their distribution systems to use or distribute ethanol blend.

The statute also lowers the incentives for ethanol production and places restrictions on how ethanol may be produced if the incentives and mandate are to take effect. The focus of the changes was to help level the competition for financing ethanol plants to encourage production in Montana from both grain and biomass feed stocks. For example, only the first 10 million gallons of the first three producers would receive an incentive of twenty cents per gallon of ethanol.

continued on page 8

The Buzz Over Biofuels - *continued from page 7*

Three firms are seeking financing for plants that would produce food, feed, and fuel ethanol in Montana. The proposed wheat-gluten plant in Great Falls plans to produce 100-million gallons of ethanol annually from wheat and barley. Another developer is planning an 84-million gallon-a-year plant near Hardin relying on corn and barley. A third project plans for a 40-million gallon-a-year plant and feedlot near Miles City. Four other groups have expressed interest in producing fuel ethanol in Montana, partly because the California demand for fuel continues to grow at six to eight percent a year. About 100 million gallons of denatured ethanol is needed annually for California's required 5.5 percent blend. Ethanol would not be moved to California in pipelines, nor is gasoline moved to California in pipelines. All pipelines move fuel out of California.

Montana's newly enacted legislation requiring use of ethanol also changed allowable arrangements for existing developers, so it is difficult to determine which plant will be first with new technology to produce ethanol in the state.

While we wait for ethanol production to start in Montana in the next year or so, there is no need to wait to use or ask for E10 when filling vehicles. The benefits today include less pollution, less need to import oil, and helping develop a new market. The benefits tomorrow may be to help revive Montana's rural economy, provide good-paying jobs for our kids and help finance education. And that would be something to be buzzing about.

More information available

For more information about the economic impacts to Montana of biodiesel and ethanol, as well as other alternative energy resources, see:

www.ethanolmt.org
http://leg.mt.gov/content/publications/lepo/004energyreport.pdf
www.ethanol.org and **www.biodiesel.org** ■